DOCUMENT RESUME

ED 147 228 SO 010 476

TITLE Mortality American Style: A Tale of Two States. An Inquiry Teaching Module [And] Interchange. Population Education Newsletter. Vol. 6, No. 5, Nov. 1977.

INSTITUTION Population Reference Bureau, Inc., Washington, D.C.

PUB DATE [77]

NOTE 32p.; Page 29 to 32 are of marginal reproducibility

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.

DESCRIPTORS *Death; Drug Education; Environmental Education; Graphs; Higher Education; Instructional Materials; Interpretive Skills; Secondary Education; *Skill Development; *Social Studies; Social Studies Units; Tables (Data)

ABSTRACT

In this self-contained inquiry module, secondary or college level students analyze data to explain the differences in mortality rates in Nevada and Utah. The module is intended to help students: (1) translate and interpret demographic tables and charts; (2) form and test hypotheses to explain demographic phenomena; (3) identify social, economic, and demographic variables that affect mortality; (4) draw conclusions about the effects of lifestyle on mortality; and (5) design original strategies for changing lifestyles so as to increase life expectancy. Throughout the exercise the teacher is primarily a facilitator. The teacher presents the data sheets of demographic tables and charts to the students one at a time, in sequence from 1 to 10. Students analyze each data sheet. The teacher may stimulate inquiry by asking questions if necessary. Students are also involved in supplementary activities. They write a proposal for legislation, are involved in class debates, and do library research. The November, 1977 issue of the newsletter Interchange which discusses the topic under study is also included. (Author/RM)

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Mortality American Style: A Tale of Two States

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An Inquiry Teaching Module

SO 010 476

Population Reference Bureau, Inc.
1337 Connecticut Avenue, N.W.
Washington, D.C. 20036

MORTALITY AMERICAN STYLE: A TALE OF TWO STATES

By LEON E. CLARK

Grade Level High School—College

Time Needed 45-60 minutes

Materials Overhead transparencies for Data Sheets 1-10. Teachers are encouraged to reproduce any part of this module for use in the classroom.

Goal To help students develop an awareness of the relationship between lifestyle and health and life expectancy.

Objectives Students might:

Translate demographic tables and charts;

Interpret demographic tables and charts;

Form hypotheses to explain demographic phenomena;

Test hypotheses with new evidence;

Identify social, economic and demographic variables that affect mortality;

Make inferences about the relationships among these variables and mortality;

Draw conclusions about the effects of lifestyle on mortality;

Design original strategies for changing lifestyles so as to increase life expectancy.

It should be understood that students would demonstrate these abilities verbally or in writing, or both.

Procedure Present the Data Sheets, one at a time, in sequence from 1 to 10. Return to previously-shown Data Sheets when needed for analysis.

With each Data Sheet, stimulate inquiry by asking questions if necessary.

The basic principle of inquiry is that students should perform their own analysis. Thus:

THE TEACHER IS PRIMARILY A FACILITATOR IN THE EXERCISE.

The states, shown only as A and B, are purposely not identified to add interest to the exercise. However, do not let the search for the states' names overshadow the far more important goal of analyzing the data to explain the differences in mortality rates in the two states. State A is Nevada; State B is Utah.

The following questions and comments, listed for each Data Sheet, may be helpful in conducting the exercise.

DATA SHEET 1. *Life Expectancy in Two Contiguous U.S. States, 1969-1971*

"What information does this table give you?"

As a rule, it is important to ask students to *translate* data before they *interpret* them, that is, put into their own words just what the Data Sheet shows.

"What strikes you about these data?"

"What could possibly explain the differences in life expectancy in these two states? Remember: they are contiguous, i.e. next to each other."

This last question launches the entire inquiry process. Give students as much time as they want to brainstorm about the possible explanations. It is useful to record the hypotheses on the board for future reference.

DATA SHEET 2. *Death Rates: Percent Greater in State A than State B*

"What information does this table give you?"

"What other explanations can you think of to explain the differences in mortality between these two states?"

DATA SHEET 3. *Comparisons: State A and State B*

"How does this information affect your hypotheses? Which would you like to pursue further?"

"What effect would each of these factors have on mortality rates? Why?"

a. *Total Population.* The size of a population does not generally affect mortality rates.

b. *Per Capita Income.* In general, the higher the income, the lower the mortality rates. However, per capita income figures can be misleading because they say nothing about the distribution of income. The important point here is that State A and State B, despite income differences, seem to have comparable social services. Hence income can be fairly safely disregarded as a causal factor in the mortality rates.

c. *Percent Urbanized.* Mortality rates in American cities tend to be higher than in the country as a whole, primarily because of a high concentration of minority groups in cities.

d. *Physicians per 100,000.* As might be expected, improved health care leads to lower mortality rates.

e. *Average Years of School Completed.* There is generally a positive correlation between education and life expectancy.

f. *Age Structure.* The older a population, the higher its crude death rate is likely to be (deaths per 1,000 population). However, age structure does not affect age-specific death rates. State A has higher death rates at every age.

g. *Racial Composition.* Since blacks have lower life expectancy than whites in the U.S., race could be a factor in State A's high mortality rates. However, a five percent difference in the percentage of blacks in State A compared to State B cannot explain a 35-40 percent difference in mortality rates.

h. *Males per 1,000 Females.* Since American males have a shorter life expectancy than do females, 67 vs. 76 years, the higher the proportion of males in a population, the higher its death rates—and at every age. However, the sex ratios in State A and State B are not sufficiently different to explain the differences in mortality rates.

i. *Environmental Conditions.* The quality of air and water can have a significant impact on mortality, but the environmental conditions in State A and State B are not appreciably different.

DATA SHEET 4. *Ten Leading Causes of Death in State A and State B, 1974*

"What differences do you notice here?"

"What do these differences suggest about life in these two states?"

"Do these differences provide any further clues as to why State A has higher death rates than State B? Explain."

DATA SHEET 5. *Death From Cirrhosis of the Liver and Cancer of the Respiratory System*

"What does this table show?"

"Do these data support any of your previous hypotheses?"

"What are the major contributing causes of these diseases?"

"How could you determine whether residents of State A drink or smoke more than residents of State B?"

DATA SHEET 6. *Alcohol and Cigarette Consumption: State A and State B*

"What is the main message of these tables?"

"What trends do you notice over time?"

"Do you have any idea which states these are?"

"What social or economic factors might tend to encourage or discourage alcohol or cigarette consumption?"

"In other words, why would the residents of one state drink or smoke more than the residents of an adjoining state?"

These last two questions are important; they lead to the formation of a new set of hypotheses. Give students enough time to speculate.

DATA SHEET 7. *Some Factors Affecting Alcohol and Tobacco Use*

"What is the most relevant factor here? Why?"

"Now do you know what states these are?"

"Why would the Mormon religion affect drinking and smoking? What are some of the tenets of the Mormon Church?"

The Mormon Church, through a section of its scripture called "The Word of Wisdom," proscribes the use of alcohol, tobacco, tea, coffee or any drink containing caffeine. It also recommends limited consumption of meat.

At the same time, Church membership has been associated with high marriage rates, large families, strong family ties, high educational achievement, and a strong commitment to work, society and the Mormon Church.

All Mormons are enjoined to donate 10% of their annual income to the church, and young people—men at 19, women at 21—are asked to spend two years in mission work at their own expense. In general, Mormons tend to lead quiet, stable, disciplined lives.

"How sure are you that it is the Mormon lifestyle that makes the difference in the mortality rates of the two states?"

"What kinds of evidence would prove the Mormon hypothesis beyond a reasonable doubt?"

DATA SHEET 8. *Cancer Among Utah Mormons and Non-Mormons, 1966-1970*

"How do Mormon cancer rates compare to those of non-Mormons?"

"What does 'Ratios of U.S. Rates' mean?"

"Which cancer sites are related to smoking? Which to drinking?"

Cancer of the larynx and lung are directly related to smoking, and about half of all bladder cancers in men and one-third in women are attributed to cigarette smoking. Cancer of the esophagus is associated with alcohol consumption.

"How persuasive do you find the Mormon hypothesis now?"

"Why would the non-Mormons of Utah also have lower rates of cancer for most sites than other Americans?"

Victor Fuchs, in his book *Who Shall Live?* (see *Sources*, 2), makes this comment about Nevada and Utah: "The populations of these two states are, to a considerable extent, self-selected extremes from the continuum of life-styles in the United States. Nevadans . . . are predominantly recent immigrants from other areas, many of whom were attracted by the state's permissive mores. The inhabitants of Utah, on the other hand, are evidently willing to remain in a more restricted society. Persons born in Utah who do not find these restrictions acceptable tend to move out of the state" (pp. 53-54).

"If elements of lifestyle—specifically smoking and drinking—can be considered the main causes of the different mortality rates in Nevada and Utah, then how do you explain the higher death rates of infants (under age 1) in Nevada?" (Refer to Data Sheet 2).

"Why do these differences decline for the 1-19 age group?"

The lifestyle of mothers directly affects the health of infants through prenatal influence. But children who survive the first year of life would not reflect these influences to the same degree.

DATA SHEET 9. *Cigarettes and Cancer in the U.S.*

"How close would you say the relationship is between cigarette consumption and cancer of the respiratory system?"

"What mathematical relationship can you detect, if any?"

"How much of a time lag is there between increased cigarette consumption and a comparable increase in cancer?"

For every 30 packages of cigarettes consumed per capita, there is an increase of approximately 10 deaths per 1,000. The time lag is about 20 to 30 years.

DATA SHEET 10. *Changing Causes of Death in the U.S.*

"How have the top 10 causes of death in the U.S. changed between 1900 and 1975?"

"What do you think has caused these changes?"

"What do these changes indicate about changes in American society since 1900?"

"What do the *current* causes of death say about American life today, if anything?"

"How could some of these current causes be prevented?"

SOME GENERAL QUESTIONS FOR DISCUSSION

- "The personal health implications of lifestyle are fairly obvious. What are some of the social implications?"
- "Pogo once said, 'We have found the enemy and he is us.' How relevant is Pogo's statement to the American health scene today? Explain."
- "If the American way of life is a threat to longevity, what can be done about it?"
- "What strategies—personal, social, economic, political—would you propose to lessen the negative impact of lifestyle on health in the United States?"

SUPPLEMENTARY ACTIVITIES

1. Writing Assignment
   You have been named U.S. Secretary of Health, Education and Welfare. The President has given you a broad mandate to propose legislation for minimizing the negative effects of the American lifestyle.

   Write a position paper for the President, outlining your proposals. Remember: you are trying to gain the President's support; the more evidence you can marshal, the stronger your case will be.

2. Class Debate
   Resolved: The American way of life has become the American way of death.

3. Research Project
   Choose one of the following topics and determine its effect on U.S. mortality.

   smoking
   drinking
   obesity
   lack of exercise
   diet
   stress
   automobiles
   race
   income
   sex (male or female)
   occupation
   education
   religion
   environmental pollution

ACKNOWLEDGEMENTS

I am indebted to Ward Morehouse, former director of the Center for International Programs and Comparative Studies, New York State Education Department, whose office supported an earlier version of this module; to Victor Fuchs, whose book *Who Shall Live?*, inspired the module in the first place and from which I have borrowed the subtitle of this module and two Data Sheets, Nos. 2 and 5; and to Thomas Kane and Andrew Leighton, both of the Population Reference Bureau, who tracked down some of the data used in the module.

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LIFE EXPECTANCY IN TWO CONTIGUOUS U. S. STATES, 1969-71

	State A	State B
Male	65.6	69.5
Female	73.3	76.6
U.S. State Ranking	46	3

DEATH RATES: PERCENT GREATER IN STATE A THAN IN STATE B

(Average for 1959-61 and 1966-68)

Age Group	Males	Females
Under 1	42%	35%
1-19	16%	26%
20-29	44%	42%
30-39	37%	42%
40-49	54%	69%
50-59	38%	28%
60-69	26%	17%
70-79	20%	6%

Data Sheet 3

COMPARISONS: STATE A AND STATE B

	State A	State B
1. Total Population (1970)	489,000	1,059,000
2. Per Capita Income (1973)	$5,560	$4,005
3. Percent Urbanized (1970)	80.9%	80.4%
4. Physicians per 100,000	119	144
5. Average Years of School Completed (1971)	12.4	12.0
6. Age Structure (1971)		
a. 65 and over	6.8%	7.4%
b. 21 and over	61.0%	54.0%
7. Racial Composition (1970)		
a. White	91.7%	97.4%
b. Black	5.7%	0.6%
8. Males per 100 Females (1970)	102.6	97.6
9. Environmental Conditions	Virtually Identical. The States are Contiguous.	

Data Sheet 4

TEN LEADING CAUSES OF DEATH IN STATE A AND STATE B, 1974

(Shown as Percent of Total Deaths)

State A			State B	
1.	Heart Disease	31.9%	1. Heart Disease	32.7%
2.	Cancer	16.7%	2. Cancer	15.7%
3.	Stroke	10.4%	3. Stroke	10.4%
4.	Accidents	9.6%	4. Accidents	8.3%
5.	Suicides	3.6%	5. Influenza and Pneumonia	2.9%
6.	Cirrhosis of Liver	2.8%	6. Mortality of Early Infancy	2.9%
7.	Mortality of Early Infancy	2.1%	7. Diabetes	2.0%
8.	Bronchitis, Asthma, and Emphysema	2.1%	8. Suicide	1.7%
9.	Influenza and Pneumonia	2.0%	9. Bronchitis, Asthma, and Emphysema	1.6%
10.	Homicide	1.9%	10. Birth Defects	1.5%

Data Sheet 5

DEATH FROM CIRRHOSIS OF THE LIVER AND CANCER OF THE RESPIRATORY SYSTEM

Percentage Greater in State A Compared to State B

(Average for 1966-68)

Age	Males	Females
30-39	590%	443%
40-49	111%	296%
50-59	206%	205%
60-69	117%	227%

Data Sheet 6

ALCOHOL CONSUMPTION: GALLONS PER PERSON

	U.S.	State A	State B	% Greater in State A Than in State B
1961	17	29	9	322
1965	18	29	10	290
1970	22	36	13	277
1975	25	45	16	281
U.S. State Ranking		1	50	

CIGARETTE CONSUMPTION: PACKS PER PERSON

	U.S.	State A	State B	% Greater in State A Than in State B
1950	120	176	72	244
1955	116	185	62	298
1960	132	199	69	288
1965	135	193	65	297
1970	127	190	66	288
1975	134	205	76	270
U.S. State Ranking		4	50	

Data Sheet 7

SOME FACTORS AFFECTING ALCOHOL AND TOBACCO USE

State A and State B Compared, 1971

1. Cost of Alcohol and Tobacco . . . . . About the Same

2. Availability of Alcohol

   State A . . . . . Unrestricted

   State B . . . Hard liquor generally limited to package stores and private clubs

   . . . Package stores are limited in number and hours of operation

3. Availability of Tobacco . . . . . About the Same

4. Minimum Age for Drinking . . . . . Identical (21)

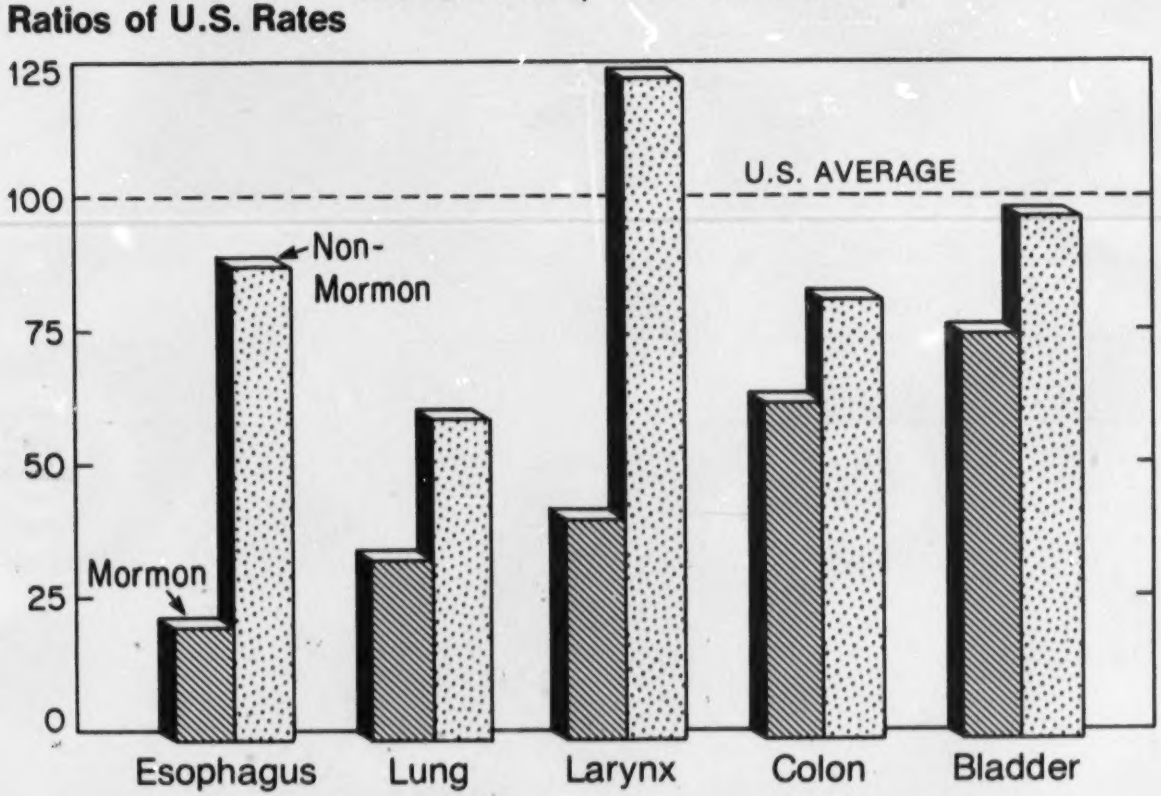
5. Religious Composition

   State A . . . . . Predominantly Christian (10% Mormon)

   State B . . . . . Predominantly Christian (75% Mormon)

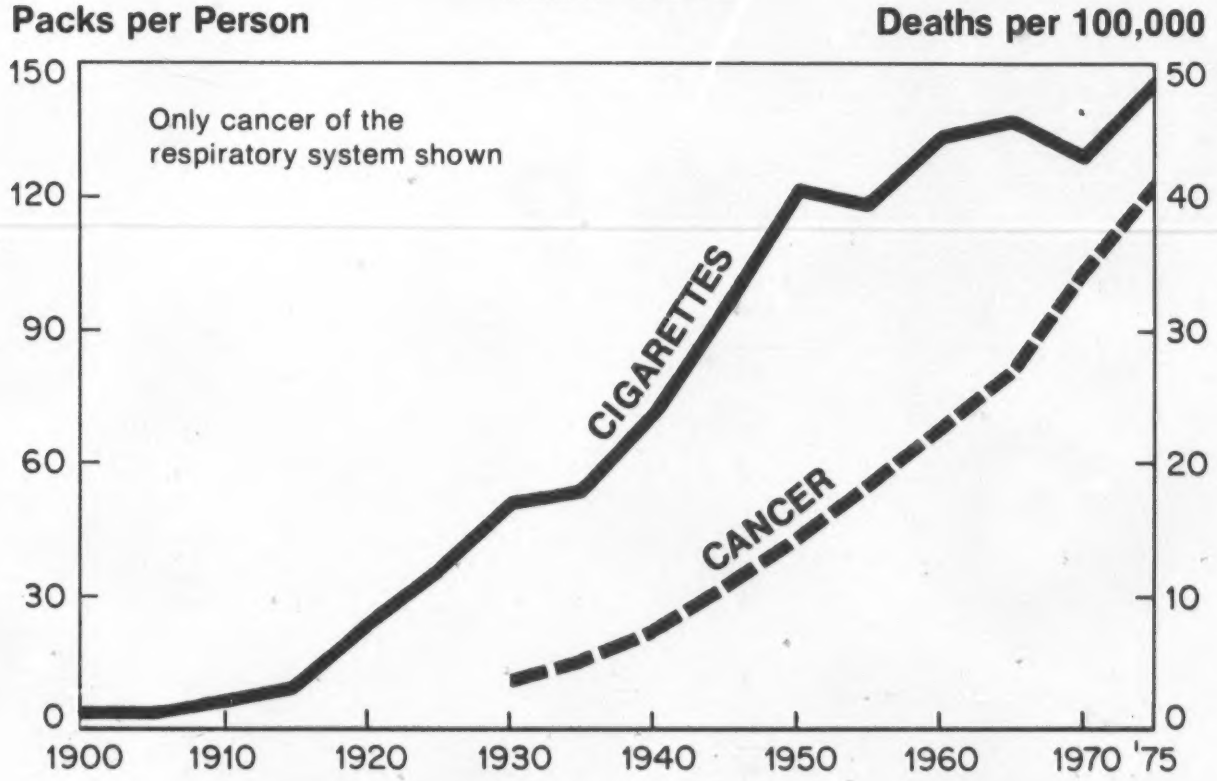
Data sheet 8

CANCER AMONG MORMONS AND NON-MORMONS IN UTAH, 1966-1970



Data sheet 9

CIGARETTES AND CANCER IN THE U.S. 1900-1975



CHANGING CAUSES OF DEATH IN THE U.S.

1900			1975		
Rank		% of total deaths	Rank		% of total deaths
1.	Pneumonia-influenza-bronchitis	14.4	1.	Diseases of the heart	37.8
2.	Tuberculosis	11.3	2.	Malignant neoplasms	19.3
3.	Diarrhea and enteritis	8.1	3.	Cerebrovascular diseases	10.3
4.	Heart disease	8.0	4.	Accidents	5.4
5.	Bright's disease (chronic nephritis)	4.7	5.	Influenza and pneumonia	2.9
6.	Accidents	4.5	6.	Diabetes	1.9
7.	Congestion and brain hemorrage	4.2	7.	Cirrhosis of the liver	1.7
8.	Diseases of early infancy	4.2	8.	Arteriosclerosis	1.5
9.	Cancer and other malignant tumors	3.7	9.	Suicide	1.4
10.	Diptheria	2.3	10.	Certain causes of mortality in early infancy	1.4

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Population Reference Bureau, Inc.

Population Education Newsletter

ISSN 0047-0465

Vol. 6, No. 5

November 1977

NOV 2 3 1977

"We have found the enemy and he is us."—Pogo

American Way of Life: A Way of Death?

A dramatic and unprecedented shift has taken place in the causes of death in the United States and other industrialized nations, a shift that raises fundamental questions about our way of life.

Historically, the struggle against early death had been a running battle against infectious, communicable diseases such as influenza, pneumonia, tuberculosis, dysentery, cholera, smallpox, and many others. And this battle continues today for the majority of humankind who live in the poor nations of the world.

But in the United States and other affluent countries, the fight has been largely won. Improved sanitation, adequate diet, mass education and the widespread use of vaccines and antibiotics have virtually eliminated the threat of most communicable diseases.

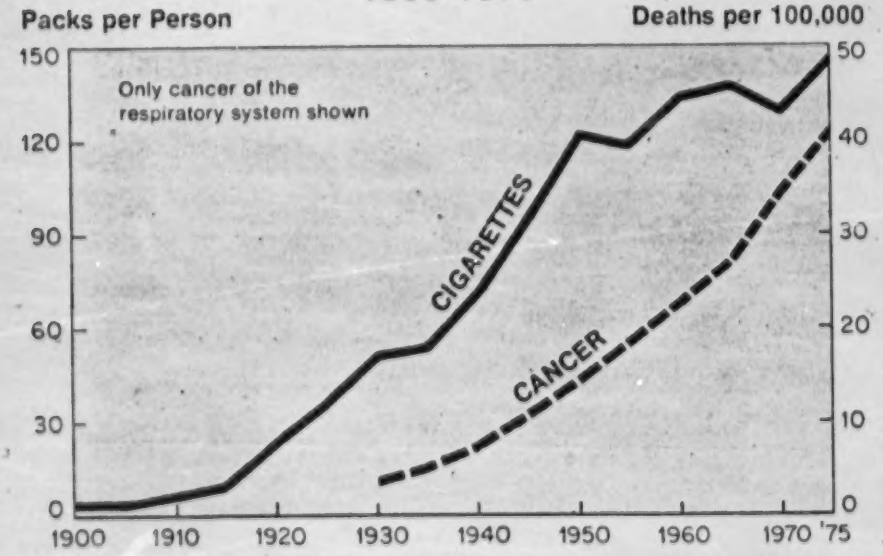
In 1900 the three top causes of death in the U.S. were pneumonia-influenza-bronchitis, tuberculosis, and diarrhea and enteritis, accounting for 34 percent of the deaths; in 1975 the top three causes were heart disease, cancer and stroke, accounting for 67 percent of all deaths. (See table on p. 2.)

THE ENEMY FROM WITHIN

The shift, then, has been away from infectious diseases and toward degenerative and man-made diseases. Or to put it another way, the enemy from without has become the enemy from within.

For a detailed account of the changing causes of death in the U.S., see the PRB Bulletin "Epidemiologic Transition in the U.S.," May 1977.

CIGARETTES AND CANCER IN THE U.S. 1900-1975



Source: Tobacco Tax Council, Richmond, Virginia, and U.S. National Center for Health Statistics.

Most of the leading causes of death in the U.S. are either directly or indirectly related to lifestyle. Even diseases of old age are brought about prematurely or exacerbated by living habits.

- Heart disease and stroke have been associated with cholesterol-rich diets, smoking, obesity, stress and lack of exercise.
- Cancers of various types have been associated with smoking, drinking, food additives, and environmental pollution. Some cancers, such as cancer of the lung and larynx, are almost certainly the result of heavy smoking in a high percentage of the cases. (See graph on p. 1.)
- Accidents, the fourth leading cause of death in the U.S., are caused by automobiles in 50 percent of the cases, and about half of these are caused by drunk driving.
- Cirrhosis of the liver is directly related to alcohol consumption.
- Arteriosclerosis is caused by cholesterol build-up, which in turn is related to diet.
- Suicide has been associated with stress.
- Bronchitis, emphysema and asthma, a group of diseases ranked number nine as a cause of death of the middle-aged, are aggravated, if not caused, by smoking and air pollution.

In sum, the major lifestyle enemies of health are smoking, drinking, poor diet, sedentariness, automobiles, stress and environmental pollution, all of which come under our personal or social control.

As Pogo once said, "We have found the enemy and he is us."

ALCOHOL AND TOBACCO

Since 1934 the U.S. rate of alcohol consumption has increased by about 150 percent, from less than 10 gallons per person in 1934 to more than 25 gallons in 1975. During that same period, the death rate from cirrhosis of the liver increased by approximately 100 percent.

The growth in cigarette consumption has been even more dramatic. In the year 1900 Americans smoked about three packs of cigarettes (60 cigarettes) for every person in the population. By 1975 that figure had increased almost 50-fold to 145 packs per person.

And despite recent campaigns against smoking, including limitations on advertising and the Surgeon General's warning on every package, cigarette consumption per capita has continued to go up, increasing almost 20 percent between 1970 and 1975.

As might be expected, deaths from cancer of the respiratory system have risen along with cigarette use, increasing from only 3 deaths per 1,000 in 1930 to 41 per 1,000 in 1975. As the graph on p. 1 shows, cancer rates have climbed virtually step by step with cigarette consumption, taking 10 more lives per 1,000 with every per capita increase of 30 packs of cigarettes 20 to 30 years earlier.

TECHNOLOGY

Besides our self-abusive habits, many of the products of our "advanced" technology have also been linked to mortality and morbidity. Items as diverse as food additives, sweeteners, hair dyes, medical drugs, pesticides, and flame resistant clothing—not to mention the numerous chemicals which cause air and water pollution—have been found to be carcinogenic. Other chemicals have been blamed for birth defects, genetic changes and sterility in men.

Ironically, then, the very process of modernization that has increased our life expectancy from 45 to 72 years in this century has now become a major threat to longevity. In a very real sense, the American way of life has become the American way of death.

In a major report on the health of Americans, published in 1976, the Federal Government announced that Americans are generally in good health, but it quickly added that our lifestyle has become a serious health hazard. The report suggests that a further increase in life expectancy would come about faster through changing our habits than through conquering disease.

CHANGING CAUSES OF DEATH IN THE U.S.

1900 Rank	% of total deaths	1975 Rank	% of total deaths
1. Pneumonia-influenza-bronchitis	14.4	1. Diseases of the heart	37.8
2. Tuberculosis	11.3	2. Malignant neoplasms	19.3
3. Diarrhea and enteritis	8.1	3. Cerebrovascular diseases	10.3
4. Heart disease	8.0	4. Accidents	5.4
5. Bright's disease (chronic nephritis)	4.7	5. Influenza and pneumonia	2.9
6. Accidents	4.5	6. Diabetes	1.9
7. Congestion and brain hemorrhage	4.2	7. Cirrhosis of the liver	1.7
8. Diseases of early infancy	4.2	8. Arteriosclerosis	1.5
9. Cancer and other malignant tumors	3.7	9. Suicide	1.4
10. Diphtheria	2.3	10. Certain causes of mortality in early infancy	1.4

Sources: Abdel R. Omran, "Epidemiologic Transition in the U.S.: The Health Factor in Population Change," *Population Bulletin*, Vol. 32, No. 2 (Population Reference Bureau, Inc., Washington, D.C., 1977), p. 27, Table 5; *Monthly Vital Statistics*, Vol. 25, No. 11, NCHS, Table 9, p. 20.

TALE OF TWO STATES

A vivid illustration of the relationship between how we live and how long we live can be seen in the mortality experiences of Nevada and Utah, two adjoining states that are almost identical in every respect except one: lifestyle.

Nevada is perhaps best known for its "wide open" cities of Reno and Las Vegas; Utah is recognized as the center of Mormonism, a religion that forbids the use of alcohol, tobacco, or any drink containing caffeine. It also recommends limited consumption of meat.

Utah's population is 75 percent Mormon; Nevada's is only 10 percent.

In 1971 the average resident of Utah lived five years longer the the average Nevadan, 75 compared to 70, and Utah ranked third in life expectancy in the country, just behind Hawaii and Minnesota, while Nevada ranked 46th.

Moreover, the death rates in Nevada were about 38 percent higher on the average than in Utah *for every age*, showing the pervasive effects of life style, even on infant deaths.

More striking still were the differences in death rates for cirrhosis of the liver and cancer of the respiratory system, ranging anywhere from 111 to 590 percent greater in Nevada, depending on sex and age. The average difference was about 250 percent.

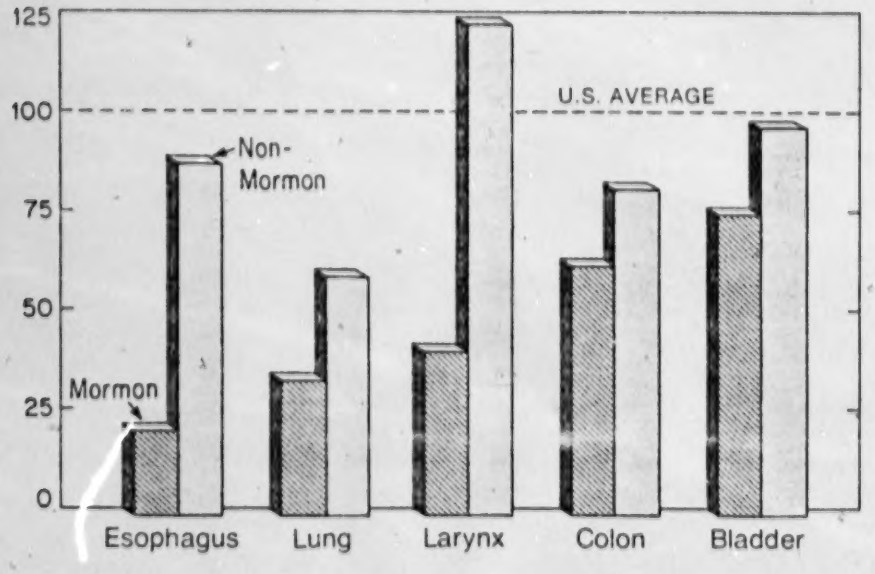
APPARENT CAUSES

The causes for these differences are not hard to find. Since 1950, when state records were first kept, Nevada has consumed almost four times as many cigarettes per person as Utah. In 1975, for example, Nevada consumed 205 packs of cigarettes per person, compared to only 76 for Utah.

Alcohol consumption patterns show similar patterns, with Nevada consuming four to five times as much liquor, beer and wine per capita as Utah. In 1975 Nevada sold an average of 45 gallons per person; Utah only 16.

CANCER AMONG MORMONS AND NON-MORMONS IN UTAH, 1966-1970

Ratios of U.S. Rates



Source: Joseph L. Lyon, et al., "Cancer Incidence in Mormons and Non-Mormons in Utah, 1966-1970," *The New England Journal of Medicine*, Vol. 294, No. 3, Jan. 15, 1976, p. 131.

"No thanks.

I'd rather have

an apple."

This ad, courtesy of the American Cancer Society, was developed by students of the University of Michigan Creative Advertising Workshop.

Despite such efforts, cigarette consumption continues to rise, and the tobacco industry now spends approximately $400 million each year on cigarette advertising

The U.S. Government spends less than $2 million a year to discourage smoking.

(Continued from pg 2)

For both tobacco and alcohol consumption, Utah ranks last, number 50, in the country. Nevada ranks 1 for alcohol, 4 for tobacco.

MORMONS AND NON-MORMONS

In a study comparing the incidence of cancer among Utah Mormons and non-Mormons, it was found that for almost all types of cancer non-Mormons had much higher rates. For cancers related to smoking and drinking, the non-Mormon rates were anywhere from 30 to 800 percent higher. (See the graph on p. 2).

The evidence from Utah is encouraging. It shows that lifestyle can indeed affect mortality and morbidity.

The need for education to create this awareness is crucial. Our lives depend on it.

Poppings

Maryland Sets Statewide Program; Planned Parenthood Joins Pop Ed

(Editor's Note: *Beginning with this issue, INTERCHANGE will run a new column called "poppings"—a potpourri of pop ed happenings—which will include stories on events, publications, plans and personalities in the field of population education. If you have any pop ed news, please send it along.)*

The Maryland State Department of Education has developed a three-week curriculum in population education to be made available this spring to teachers in every high school in the state.

The unit is designed to be taught by teams of social studies and science teachers. It includes background reading for teachers and students, as well as lesson plans.

For further information contact: Dr. James R. Latham, Jr., Consultant in Science, Maryland State Department of Education, P. O. Box 8717, BWI Airport, Baltimore, MD 21240.

Planned Parenthood

The national office of Planned Parenthood-World Population has launched a major pop ed project designed to involve its 300 affiliates and chapters in both formal and non-formal education programs.

Directed by Sherry Barnes of Planned Parenthood's Population Information Program, the project will help affiliates conduct workshops for their own staff members and other community leaders, evaluate texts for population and pronatalist content, and distribute the film "Population and the American Future."

"Affiliates participating in the pop ed program regard it as an opportunity to expand their role as an educational resource in their communities," Barnes said.

She also pointed out that while Planned Parenthood's population education program was completely different and separate from its sex education program, Planned Parenthood is trying to serve as a resource for both activities.

ZPG Leadership Project

Zero Population Growth, Inc. launched a new pop ed leadership program this month when it held a two-day workshop in Washington for 26 educators from around the country.

The participants, who came from as far away as Portland and Palo Alto, were largely curriculum specialists from state education departments and leaders from national environmental and population organizations.

"The purpose of the program is to train leaders who can conduct their own pop ed workshops," said Elaine Murphy, director of pop ed at ZPG. "Our goal is to achieve a multiplier effect."

Besides covering all travel and lodging expenses, ZPG also supplied each participant with 40 packets of materials to be used in workshops "back home." Participants agreed to conduct at least one workshop as part of the program.

The Population Reference Bureau conducted one afternoon session of the workshop and contributed material to the program.

The workshop was supported by a grant from the U.S. Office of Environmental Education.

Massachusetts Conference

Educators from across Massachusetts will gather in Boston for Zero Population Growth's fourth annual conference on population education at the Boston Museum of Science on Friday, Dec. 9.

School administrators, curriculum supervisors, and classroom teachers are invited to participate. A registration fee of $8 includes lunch and materials. For further information contact: Zero Population Growth, Inc., 14 Beacon St., Boston, MA 02108.

Authors Wanted

Interchange needs good ideas for future teaching modules.

If you have any population-related materials that you have created—and your students have especially liked—please let us know. Fame and fortune await you. Well, fame at least.

The materials do not have to fit any particular model. They can be zippy 10-minute quizzes or five-day units; they can be games or role-plays, debates or dialogues, inquiry episodes or values clarification exercises.

Or if you have ideas that you have not had time to convert into actual materials, send them along, too. Maybe we can work on them together.

Special Note: How have you liked the two modules produced so far? We welcome your reactions.

Charts

Charts

Charts

Did you know?

- Nearly half the earth's population is squeezed onto about 5 percent of the earth's land mass.
- The U.S. median age at marriage has historically been the lowest of all industrialized nations.
- In 1950 there were 71 urban centers worldwide with a population of a million or more, but by 1975 there were 181.
- In 1975 the proportion of white couples who were sterilized was only slightly less than the proportion using the pill.
- In 1790 about 90 percent of the U.S. population lived on farms—but today only 4 percent do.
- Of 125 million children born worldwide in 1977, about 13 million will die either at birth or before their first birthday.

These and other interesting facts appear in PRB's new chart series.

The charts are available in two sizes:

Wall Size (17" x 22").

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Wall-size charts measure 17" x 22".

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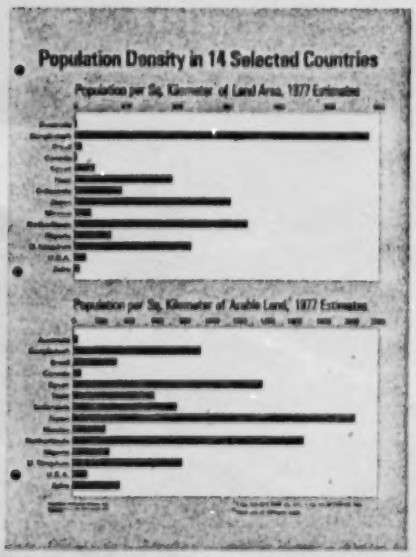

Notebook-size charts 8-1/2" x 11", are printed on both sides, as shown above.

Interchange is . . .

a publication of the Population Reference Bureau, Inc., written by Leon E. Clark, with the assistance of Andrew J. Leighton and Helen T. Lambert, and published bimonthly during the academic year. It is distributed free on request to educators and centers of population education activity. The purpose of the newsletter is to further the goal of infusing population materials into U.S. schools by: (1) presenting information on population-related issues; (2) distributing classroom materials; and (3) reviewing developments in the field of population education. Interchange depends upon an exchange of information and ideas and thus openly solicits correspondence from its readers.

The Population Reference Bureau, Inc., 1337 Connecticut Ave. N.W., Washington, D.C. 20036, is a non-profit education organization established in 1929. The Bureau is a source of information on the facts and implications of national and world population trends. Through a special $5 membership, school teachers receive Interchange, teaching modules, Population Bulletins, the annual World Population Data Sheet, PRB Reports, and Intercom.

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